



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

this field was the Hungarian, Csoma de Kosroes, who lived many years in the country. In useful researches no one exceeded Moorcroft. Since the establishment of the sanitary stations near the frontiers many tours have been undertaken by British officers, and some have returned with valuable information, principally relating to Lahdak. Mention might also be made of Turner's embassy to Chashe-lo-umboo and Abdul Russol's account of Tibet. The Chinese also have published statistical accounts and vocabularies of the language.

'Georgii Alphabetum Tibetanum' is an extraordinary work. The concerns of the mission are best described by M. Herrera's "Representacion sobre el estado actual de la mission de Thibet." Desideri's notes may be read with advantage. Du Halde's work on China, as well as Klaproth's Remarks and Hamilton's 'East India Gazetteer,' contain important remarks. The Tsanang-ssetsen, or Mongolian annals, throw some light upon the history, and the Chinese Repository has some very good articles on the country. The Chinese map recently published appears to be the best, as, since the survey executed at the beginning of the last century by Kanghe, very essential additions have been made; and in the 'Tat-sing hwayteen' some statistical accounts of the country are found.

---

XV.—*Notes on the Physical Geography of Palestine*.—Extracted from the Letters of Colonel Von WILDENBRUCH, late Prussian Consul-General in Syria, addressed to A. Petermann, Esq., Hon. Mem. of the Geogr. Society of Berlin, &c.

[Read June 25, 1849.]

It is well known that part of the Dead Sea can be seen from the Mount of Olives; and I confess that the appearance scarcely justifies our assuming so great a depression as it really proves to be. It is only when you gradually descend from Bethania, and more especially from Jericho, that you are aware of a continued, though scarcely perceptible, descent. You here advance in a perfect but greatly inclined plane. The reverse of this takes place with respect to the Lake of Tiberias. From the top of Mount Tabor you see both the Bay of Acre and the Lake of Tiberias (the northern extremity): you also can trace the course of the Jordan to the S. of the lake, not the river itself; but the deep channel through which it flows is strongly marked on the plain.

The plain at the foot of Mount Tabor, extending towards the Lake of Tiberias and the battle-field, is apparently but little elevated above the level of the sea. In riding from Mount Tabor through Khan-el-Tudjar towards Tabarieh, a deep valley

opens, which appears to be much more depressed than 328 feet, as calculated by Symonds, taking into consideration the entire formation of the land between the Mediterranean and the Lake of Tiberias. Any one who has been in these parts (and I have discussed this point with many travellers) will coincide in this opinion. I know no better instance of that descent to the shores of the Lake of Tiberias than the road between Optechina and Trieste. Here Trieste and the sea appear to be almost under the feet of the traveller; and the same thing takes place with Tabarieh and the Lake of Gennesareth. I employed almost three-quarters of an hour in the descent. The road is winding but excellent, and sometimes very precipitous, and my horse was strong and fleet; it would therefore appear that there is no very considerable error in my measurement of this place (= 845\* feet below the level of the Mediterranean). There can be but little difficulty, considering all that has been done, in determining these points in such parts of the Valley of the Jordan, as well as in such of the Wady el Arabah, as are on a level with the sea; and I anxiously hope for an opportunity of accomplishing this. I well know that at Jacob's Bridge I was not far from such a point, and I therefore endeavoured to follow the course of the river in a southern direction. I soon discovered, however, that this attempt exposed me to the loss of my barometer; and I proceeded only for three-quarters of an hour until I came to a mill, near which, on the eastern bank of the river, there is a square fort, which had been constructed by the crusaders. Here the Jordan (30 paces broad at Jacob's Bridge—the bridge as rebuilt by Jezair Pasha is 45 paces long) rushed headlong (and divided into many arms) at so rapid a rate that it might well be compared to a continuous waterfall. The banks were covered with vegetation, so thick as almost to conceal it. Although I can trust to my bodily strength, I did not venture to bathe below the bridge; and as the river above it is marshy, I chose for that purpose a canal about  $3\frac{1}{2}$  feet deep, which conducts the water to a mill with much less fall. But even here I found the current so strong that, to prevent my being carried away, I was obliged to hold by the overhanging boughs, and did not care how soon I left that unpleasant position. I had sufficient opportunity to ascertain that the river is almost stagnant from *Lake Hûleh* to the bridge; and I had there some tolerably good angling. The marshy nature of the lake (*Hûleh*), and the fact of its surface extending over a greater or less portion of its bed, according to the season of the year, makes it impossible to determine its form and size with accuracy.

---

\* According to the late American survey 652 feet. See also 'Journal of the Royal Geographical Society,' 1848, pp. 77 and 89, for the articles by Dr. Robinson and Mr. Petermann.—Ed.

From *Jisr Benat Yakub* (Jacob's Bridge) you ride, at quick pace, uphill for about  $\frac{1}{4}$  of an hour, when the valley of the Jordan widens. Up to this point it was about  $\frac{1}{2}$  an hour wide, and formed by hills from 400 to 500 feet high, covered with brushwood. On the top of the last height of the western border of the valley, about 2000 feet from the outlet of the Jordan, and 200 paces from the Jordan itself towards the W., without correction of the needle,—

Outlet of the Jordan from the lake bore N.  $15^{\circ}$  E.

Highest point of *Jebel el Sheikh* „ N.  $34^{\circ}$  E.

Greatest width of the lake, from N.  $15^{\circ}$  W. to N.  $36^{\circ}$  E.

*Tell Keissar* (apparently an artificial mound on the lake), N.  $4^{\circ}$  W.

Castle Hunin (in the *Blad Bsharah*, belonging to the noble family of Muhammed-el-Bey), N.  $30^{\circ}$  W.

Close to the Jordan, due E. from this spot, on the right, *i. e.* the eastern bank of the river, is a tower:  $\frac{1}{2}$  an hour from here to *Tell Keissar*. The bed of the lake is about 2 hours (or 4 geo. miles) wide. The lake is full of aquatic plants. To the W. occurs the low mountain-range of *Blad Bsharah*, and magnificent fields of wheat extend to its foot.

From the bridge to *Tell Keissar*,  $\frac{3}{4}$  of an hour.

From *Tell Keissar*: *Jebel Sheikh* (highest point) N.  $31^{\circ}$  W.

*Hunin*, N.  $42^{\circ}$  W.

Direction of the shore of the lake to *Ain-el-Mellaka*, N.  $42^{\circ}$  W.

Outlet of the Jordan, and direction of the shore towards it, S.  $34^{\circ}$  E.

Proceeded along the bank towards *Hunin* and *Ain-el-Mellaka*, for 35 minutes. Here (after 35 minutes) is the widest expanse of the lake, which I estimate at  $1\frac{1}{2}$  hours. The western shore of the lake is flat, covered with reeds, and marshy. On the eastern occurs a range of steep heights, the continuation of which forms the eastern border of the Jordan valley. From this point to *Ain-el-Mellaka*,  $\frac{1}{4}$  hour; three Tells (artificial mounds) on the shore of the lake. From that widest part the road to *Ain-el-Mellaka* turns N.  $52^{\circ}$  W.: ruined village and mill; rapid streams flowing to the lake. The sea of reeds began this season (24th April) at *Ain-el-Mellaka*. I understand that in winter water is said to stand for 2.2 geo. miles beyond *Ain-el-Mellaka*. From *Ain-el-Mellaka* to the end of the sea of reeds and the beginning of meadows 1 hour. Here you change the direction you have hitherto followed, and turn eastward towards *Banias*: then meadows and rice-fields. From the point where the sea of reeds ends to *Nahr-el-Halfa*,  $1\frac{1}{2}$  hour: (confluence of the *Hasbany*); from thence to a magnificent Roman bridge across the *Nahr Hasbany* (which may be considered as the true Jordan), 1 hour. From thence to *Tell-*

*el-Kady*, 2 hours. The *Kalaat* (castle) *Banias* is  $1\frac{1}{2}$  hour distant from *Tell-el-Kady* (steep ascent); *Banias* itself, 1 hour: bearing E.  $87^{\circ}$  S.

	Distance.	Bearing.
From Castle <i>Banias</i> ,	<i>Majdel</i> , village, $1\frac{1}{2}$ h.	N. $72^{\circ}$ E.
	<i>Jebbara</i> , id. 1 h.	N. $71^{\circ}5$ E.
	<i>Hazzour</i> , ruins, $\frac{1}{2}$ h.	N. $87^{\circ}$ E.
In <i>Jebel Sheikh</i>	<i>Haurit</i> , id. 2 h.	E. $54^{\circ}$ S.
	<i>Aukunmia</i> , village 1 h.	E. $43^{\circ}$ S.
	<i>Zaoura</i> , id. 1 h.	S. $10^{\circ}$ W.

Apparent western point of the lake from <i>Huleh</i> to <i>Ain el Mellaka</i>	S. $33^{\circ}$ W.
<i>Castle Hunin</i>	S. $76^{\circ}$ W.
<i>Abil</i> , village, about 4 h.	W. $81^{\circ}$ N.
<i>Ghagar</i> , vill., „ $2\frac{1}{2}$ h.	W. $72^{\circ}$ N.
<i>Sarada</i> , 3 h. beyond the last.	W. $71^{\circ}5$ N.
<i>Kufret Sheba</i> , 1 h. (in <i>Jebel Sheikh</i> ).	W. $36^{\circ}$ N.

The following villages are said to be in *Jebel-el-Sheikh*, but they are not visible:—Kefr-Hammeh, Hubbarieh, Mimis, Shvoia, Kfei, Ainata, Resheia, Ain-fit, Bkeifa, Aina, Kefr-kouk, Jinnai, Haurassa (ruins), Kefr-Dura (ruins), *Bsheideh*, Ghagar.

In *Zaoura* and *Ghagar* the inhabitants are Nussairians, the only ones in this district, and probably in the whole of Southern Syria.

I have yet to observe, that I do not at all agree with *Dr. Robinson*, when he says that future researches alone will enable us to determine the elevation of *Cale-Syria* above the sea, since the estimates which had been made hitherto raise it *far too high*. I believe that it is exactly on this point that I can refer to my section of the country between *Beyruth* and *Damascus* with more confidence than on any other observations; because in this case I had the use of one of *Eckling's* hypsometers, which had been proved by the most competent men of *Vienna*; and a second hypsometer served to make simultaneous observations at *Beyruth* (at 8 o'clock in the morning, 12 o'clock at noon, and 5 o'clock in the evening). Although I have left all my books and papers in *Syria*, I still find from some notes that I calculated *Baalbek* at an elevation of 3332·34 (*Paris* feet), by means of the barometer. *Schubert's* estimate is 3572 feet; *Russegger's*, 3496 feet; consequently the greatest variation is only 240 feet. I do not see why—the suppositions of *Dr. Robinson* not being proved—we should all of us have been wrong.

Mere inspection shows that *El Bekaa*, or *Bukaah*, is a high plain; and more especially the circumstance, that in order to descend into it one hour is sufficient to get from the highest foot of the *Lebanon* to *Mekseh*, on the *Damascus* road; and that foot

is 5032·3 feet high, according to my calculations. The date-tree grows neither in the *Bukaah* nor at Damascus; but there are some beautiful specimens of it in the Lebanon, at an elevation of almost 2000 feet (at *Ain-Anoub* and *Deir-el-Kammar*). In winter the snow often remains lying for days together in the *Bukaah*; while it scarcely covers the ground for a single day on the slope of the Lebanon, facing the sea, even at the height of more than 3000 feet. The surface of the Leontes (*Littany*, but commonly *Kasmieh*) at the bridge of *Merj* (in the middle of the *Bukaah*, and about 5 hours south of Baalbek) was calculated by me at 2879 feet, by means of the boiling apparatus. I find in my notes that from *Khan-el-akmar* to *Baalbek*, one ascends considerably, although in the plain; and that from thence to *Mallaka*, near *Zahleh*, and down to *Merj*, one descends. I do not remember whether Dr. Robinson saw the Leontes anywhere else but at its mouth, yet I have crossed it at four or five different places in the *Bukaah*; once at the point where it breaks through the mountain, and four or five times at its mouth. In ancient Cœle-Syria it flows calmly and quietly, its bed not being narrowed by any rocks, and the mass of its water being diminished by innumerable canals for the irrigation of the fields; nevertheless it flows very rapidly. After its entrance into the mountains the *Kasmieh* changes into a mountain-torrent, which precipitates itself from rock to rock; and it is only for about  $\frac{1}{2}$  an hour before reaching its mouth, where it issues from the mountains into the narrow plain along the sea shore, that it again flows slowly and quietly through the meadows. From its mouth up to its issue from the *Bukaah* and entrance into the Lebanon, there are only *seven* places at which it can be crossed; and I understand that it is only at these spots that it is possible to approach its banks. These points when it can be crossed are, beginning from its mouth, the following:—

1. *Jisr* (bridge) *el Kasmieh*, close to the sea; on the road between *Saida* and *Tür*.

2. *Jisr el Akaï* (said to be at 4 hours' distance from the mouth).

3. *Jisr el Khardali*. We here crossed the river on our way from Jerusalem, Naplus, the so-called sources of the Jordan, Baniyas, and *Merj Aioun*. It was about 30 feet wide, and fell in cascades. About 1500 feet perpendicularly above the bridge, there is on its northern bank the magnificent castle *Kalaat es Sekkif* (Belfort) in good repair. We ascended to it in order to get on to the high plain of the *Blad Bsharah*, which is exclusively inhabited by *Mutawalis*. According to my barometrical measurement, it appears that the level of the Leontes is here 524 feet above the sea.

4. *Jisr el Khatueh*, said to be at 2 hours' distance above the preceding.

5. *Jisr el Burghuz*,  $2\frac{1}{2}$  hours further than the last.

6. *Jisr el Meshghara*.

7. *Jisr el Karaoun*. They say that at this bridge a considerable rivulet, *Neba el Feluj*, falls into the Kasmieh.

*Mr. Petermann's Note, containing Tabular Summary, &c.*

*Note*.—The following *Tabular Summary* I had compiled from published works on Palestine, to accompany a *Climatological* diagram, which has since appeared in the General Physical Map of Palestine in my 'Physical Atlas.' It only pretends to give the principal characteristic features of every month.

*Climatological History of the Months in Palestine.*

(Progress of the Seasons as indicated by that of Vegetation.)

*January*.—Country verdant with young corn; groves and meadows adorned with many flowers; almond-tree and peach-tree in blossom.

*February*.—In the lower and warmer parts orange-tree laden with ripe fruit.

*March*.—All trees in full leaf, many in bloom. In the lowlands, orange and lemon trees laden with fruit; palm-tree blossoms; barley begins to ripen.

*April*.—Oleander flowers, and white mulberry fruit ripens; barley harvest; wheat harvest begins in the valleys.

*May*.—Principal *harvest month*, especially of wheat; apricots and apples ripen. In the Jordan valley vegetation is withered and burnt up.

*June*.—Grapes begin to ripen; almonds ripe. (Beyrout honey of the Jordan valley collected in May, June, and July.)

*July*.—Various fruits: apples, pears, plums, dates, &c.; olives begin to ripen, grapes fully ripe; pumpkins.

*August*.—Principal *fruit month*, olives ripe.

*September*.—Commencement of vintage; harvest of the dourra and maize; cotton and pomegranate ripens.

*October*.—*Month of vintage*; gathering of cotton; ploughing and sowing commences; pistachio-nuts ripen.

*November*.—*Month of ploughing and sowing*; rice harvest; fig-trees, of which there are many varieties, laden with fruit.

*December*.—Trees lose their leaves; the brown and desolate plains and deserts become green pastures.

(The preceding table I sent to Col. von Wildenbruch, with the request to revise and correct it from his own personal observations. His reply is as follows:—)

... I hope that the following little table will be of some use to you for your *Climatological* researches. All this refers to *Beyruth* and the *sea coast*.

*January*.—The country green and blooming; heavy rains and storms (in Syria I never experienced rain without storms); anemones, narcissus, crocus, cyclamina flower; oranges begin to ripen, and orange, as well as citron and lemon trees, &c., cease to bloom, *i. e.*, they continue to bear blossoms, but *less* copiously, for in fact they never *cease* to blossom, except for two or three summer months. Snipes, ducks, plovers, storks, herons, cranes, and wild geese visit the plains; the woodcock moves to the north in the middle of the month: pink, geranium, and orange blossoms flourish in the plains throughout the year, as do the cyclamina in the mountains.

*February*.—Almond, peach-trees, and ficus indica in full bloom (the